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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,550	09/23/2003	Prashant R. Chandra	P16883	2918
28062	7590	08/19/2005	EXAMINER	
BUCKLEY, MASCHOFF, TALWALKAR LLC 5 ELM STREET NEW CANAAN, CT 06840			MARTINEZ, DAVID E	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,550

Applicant(s)

CHANDRA ET AL.

Examiner

David E. Martinez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Abstract*

The abstract of the disclosure is objected to because it is not descriptive enough. It should be limited to a paragraph rather than one short sentence. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is also reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13 and 15-21 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. US 2004/0218631 A1 to Ganfield.

1. With regards to claims 1 and 20, Ganfield teaches an apparatus, comprising:
  - a communication path to exchange information packets [fig 1 element labeled “network ports”, paragraph 22];
  - a processor to process information packets [fig 1 element 100, paragraph 22]; and
  - a buffer pool cache [fig 1 element 530] local to the processor [fig 1 element 100] to store free buffer handles for information packets [paragraph 32].
2. With regards to claims 2 and 21, Ganfield teaches the apparatus of claim 1, wherein the processor and buffer pool cache are formed on the same integrated circuit die [fig 1 network processor element 102 including element 530].
3. With regards to claim 3, Ganfield teaches the apparatus of claim 1, wherein the communication path comprises:
  - an input path for receiving information packets [fig 1 element labeled “network ports”, paragraphs 5, 22]; and
  - an output path for transmitting information packets [fig 1 element labeled “network ports”, paragraphs 5, 22].

4. With regards to claim 4, Ganfield teaches the apparatus of claim 1, wherein the communication path comprises:

a memory path [fig 1 element 116 connected to element 102 through 2 communication paths] for fetching and freeing buffers [paragraphs 29-32].

5. With regards to claim 5, Ganfield teaches the apparatus of claim 1, wherein the processor comprises:

a receive processor connected to the communication path to process information packets [fig 1 element 108]; and

a transmit processor connected to the receive processor and the communication path to process information packets [fig 1 element 108].

6. With regards to claim 6, Ganfield teaches the apparatus of claim 1, wherein the processor comprises:

a secondary processor [fig 1 element 106 or 104] connected to the communication path [fig 1 element labeled "network ports", paragraphs 5, 22] and the buffer pool cache [fig 1 element 530].

7. With regards to claim 7, Ganfield teaches the apparatus of claim 1, wherein the communication path connects to at least one of a dynamic random access memory and a static random access memory [fig 1 element 116 paragraph 22].

With regards to claim 8, Ganfield teaches the apparatus of claim 1, wherein the buffer pool cache is a set of next neighbor registers configured to form a next neighbor ring [paragraphs 32-34].

8. With regards to claim 9 and further regards to claim 20, Ganfield teaches the apparatus of claim 1, further comprising: a (asynchronous –ATM – claim 21) communication interface device [fig 1 element 108 paragraph 22].

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9. With regards to claims 10 and 17, Ganfield teaches a method, comprising:  
receiving an information packet [fig 1 element labeled "network ports", paragraphs 5, 22];  
and  
fetching from a local buffer pool cache [fig 1 element 530] a buffer handle [paragraph 31]  
to be associated with the information packet [paragraphs 29-30, 32].
10. With regards to claims 11 and 18, Ganfield teaches the method of claim 10, further comprising:  
storing the information packet in a buffer associated with the fetched buffer handle  
[paragraphs 27-28, 32].
11. With regards to claims 12 and 19, Ganfield teaches the method of claim 11, further comprising:  
processing the information packet [paragraph 5];  
transmitting the information packet [fig 1 element labeled "network ports", paragraphs 5, 22];  
freeing the buffer handle to the local buffer pool cache [must be done when a packet is transmitted out of the processor, the packet must leave the buffer where it was stored, and the corresponding buffer handle must be freed up].
12. With regards to claim 13, Ganfield teaches the method of claim 12, further comprising:  
fetching a buffer handle from a non-local memory when the local buffer pool cache is empty [paragraph 32].
13. With regards to claim 15, Ganfield teaches the method of claim 12, wherein the local buffer pool cache is a set of next neighbor registers configured to form a next neighbor ring [paragraphs 32-34].

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14. With regards to claim 16, Ganfield teaches the method of claim 12, wherein the information packet is processed by at least one of a receive processor [fig 1 element 108], a transmit processor [fig 1 element 108], and a secondary processor [fig 1 elements 104 or 106].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2004/0218631 A1 to Ganfield.

With regards to claim 14, Ganfield is silent as to the method of claim 12, further comprising freeing the buffer handle to a non-local memory when the local buffer pool cache is full. However, freeing a buffer handle to a non-local memory when the local buffer pool cache is full is obvious for the benefit of freeing up system resources.

It would have been obvious to one of ordinary skill in the art at the time of the invention to free the buffer handle to a non-local memory when the local buffer pool cache is full for the benefit of freeing up system resources.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Martinez whose telephone number is (571) 273-4152. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272-4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEM



**KIM HUYNH**  
**PRIMARY EXAMINER**  
8/17/05